

# 5% Nutrition Core L-Citrulline 3000: Citrulline with a Hit of Glycerol

written by Mike Roberto | September 20, 2022

Most bodybuilding enthusiasts have heard of legendary bodybuilder *Rich Piana*. And most readers here know that he founded his own *nutritional supplement* company. He named it *5% Nutrition*, as an allusion to his belief that only 5% of *people on the planet* have the grit, determination, and talent to achieve their highest potential and become the best possible version of themselves.

Rich founded his company to serve this 5% by creating *premium supplements* that support their mental and physical performance while in pursuit of their goals.



And Rich always knew that a little extra *nitric oxide pump* was a great thing to have – even in *non-workout* situations!

## The 5% Take on Citrulline: No Nonsense

**5% Core L-Citrulline 3000** is a *no nonsense, back-to-basics* approach to achieving added *pumps* – or slightly lowered blood pressure, which can be useful in many situations.

Citrulline is one of the most trusted and effective *pump-inducing ingredients* on the supplement market today, and is also *incredibly safe*, even in large doses. This means we can add *more* to your current stack, anytime, anywhere.

But 5% went further – as with most of the rest of the 5% Core Line, they don't just go with single ingredients! Here, they've added a hit of **glycerol** to

increase cellular hydration while at it.

The *strength* of a product like 5% Core L-Citrulline 3000 is not just that you can easily double or triple scoop it if you desire a bigger effect: you can also easily *combine it with other products* just to up the citrulline and glycerol as needed.

## Rich Piana 5% Nutrition Core L-Citrulline 3000 – Deals and Price Drop Alerts

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## 5% Nutrition Core L-Citrulline 3000 Ingredients

In a single 1-scoop (3.9 g) serving of **Core L-Citrulline 3000** from 5% Nutrition, you get the following:

- **L-Citrulline – 3,000 mg**



The amino acid **L-citrulline** is popular as a *nitric-oxide* (NO) boosting

ingredient[1] – as popular as they come, in fact.

Citrulline is considered *conditionally essential*, meaning that although your body is capable of synthesizing its own citrulline *endogenously*, it can't produce it fast enough to cover your nutritional citrulline requirements during periods of elevated consumption, such as illness or injury.

Between citrulline and NO, there's actually an *intermediate step*: citrulline is converted into *arginine*, which is *then* converted to NO.\*\*

We like NO boosters because increasing NO production causes *vasodilation*, a phenomenon where blood vessels grow in diameter and facilitates better *circulation*. Not only does blood perfuse your tissues more deeply, but your heart and arteries don't have to work as hard – heart rate and blood pressure *drop* in response to NO-mediated vasodilation.[2-4]

One upshot of all this is that oxygen and nutrients are delivered to your tissues – including muscles – more efficiently. And metabolic waste products are also *cleared out* more efficiently. This helps you *perform better* athletically. *Endurance*, particularly, seems to benefit from increased NO production.

And when your workout ends, you can recover from it faster.



There's pumps, and there's Rich Piana pumps

The evidence shows that citrulline can:

- Increase *power* by increasing *oxygen uptake*[5]
- Prolong *athletic endurance* by as much as 50%[6]

- Reduce *delayed onset muscle soreness* (DOMS) after exercise by about 50%[6]
- Increase *growth hormone* (GH) production after exercise[7]
- Reduce amino acid catabolism[8]
- Activate muscle protein synthesis[9,10]

Finally, supplementing with citrulline increases your body's levels of *ornithine*,[11] an amino acid that detoxifies *ammonia*. [12] Since ammonia levels are a major factor in both mental and physical fatigue, this is one explanation for citrulline's endurance-boosting effects.

Ornithine's impact on metabolic function can even *improve sleep quality* and reduce perceived stress in those who take it, partly by decreasing cortisol-to-DHEA ratio.[12]



The minimum effective dose of citrulline has been measured at *3,000 milligrams*, so that's why 5% Nutrition has selected that dose as the baseline for Core L-Citrulline 3000.

However, note that this product has *60 servings per container* – you could *double your intake* daily and still have a month's supply from one container.

In fact, the point of diminishing returns on citrulline supplementation is as high as *10,000 milligrams per day!*[13] So if you want an *even better pump* than what the standard 3-gram dose provides, try double, or even *triple-scooping*.

One of the reasons we love the simplicity of this formula is that it allows consumers to choose their own citrulline dose. When you stack citrulline with stimulants like caffeine, rauwolscine, or yohimbine, it limits how much you

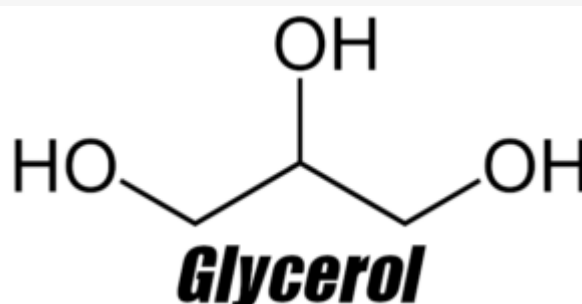
can take in a day. Core L-Citrulline 3000 doesn't have that problem.

*\*\*The reason you supplement with citrulline instead of arginine is that citrulline is orally bioavailable, whereas arginine is not.[14,15]*

- **Glycerol Powder (65% Glycerol) (GlycerSize) – 500 mg**

**Glycerol** is a sugar-alcohol byproduct produced when the body burns glucose and fatty acids for energy.[16,17]

It's important for *hepatic gluconeogenesis*,[18] the process the liver uses to convert *non-glucose substrates* like *protein* into glucose.



No doubt, the simple **glycerol** molecule has "mission critical" status with the body. But when we supplement far more, incredible benefits related to *hydration* occur!

Oral glycerol supplements are metabolized by the *liver* and *kidneys* before they're distributed to every part of the body. However, your *brain* and *eyes* are exempt from this process and unaffected by glycerol supplementation.[19]

Glycerol works by increasing the *osmotic pressure* in your tissues, which naturally forces water into cells.[19]

Recall that *osmosis* is the mechanism that moves water from an area of *higher solute concentration* to one of *lower solute concentration*, typically across a membrane (in this case, the cellular membrane).[20]

### **The benefits of hyperhydration: Increased endurance**

This higher-than-usual cellular water content creates a state called *cellular hyperhydration*,[21] which comes with a number of benefits.

Chief among them is *increased endurance* for your cells, including *muscle* cells. During exercise, this effect is significant enough to actually delay the onset of whole-body fatigue.[19]

## An *unflavored* supplement

Normally, we're huge fans of 5% Nutrition's flavoring – and that's why we're *not* flavored here. Core L-Citrulline 3000 is meant to be *added* to your existing supplement to get an even more powerful boost. If you're already taking a *Rich Piana pre-workout supplement* (*Kill It Reloaded* is our general go-to), you already have great flavoring, so just add this in.

## Not just for pre-workout!



But as we said in the intro, there are *other* reasons you'd want to improve nitric oxide levels. For instance, adding Core L-Citrulline 3000 to your *Sleep Drink Grow* sleep aid could theoretically help lower blood pressure and improve sleep.[22,23] Reason being, nitric oxide plays a key role in sleep governance.[23]

Additionally, the glycerol may help you retain more urine! You can read more about this in our article titled *Urination at Night?! Add GLYCEROL to Your Sleep Aid!*, which cites a few studies where athletes taking glycerol urinated less.

Getting back to athletics, another idea is to simply add it to your ALL DAY YOU MAY intra workout supplement to keep those pumps coming long into your Rich Piana style *all day arm workout*. There's really never a time when some

citrulline's a bad idea!

## Conclusion: Citrulline and a bit more

Supplement manufacturers try to outdo each other, a kind of *pump arms race* (no pun intended) has escalated. It's gotten to the point where, most of the time, you see ingredients like citrulline and glycerol stacked with so many other ingredients that *something* in the formula limits how much of the product you can take.

For example, you might see these two in a *pre-workout* containing 300 milligrams of caffeine, which is *most* people's upper limit. Very few people can comfortably take more than 300 milligrams of caffeine at once.

So in this hypothetical product, you're really limited to consuming a single serving, or less.

There's not much more to say about this one – citrulline and glycerol are both awesome ingredients, ones that we would recommend to almost anybody because they just *work*.

Stacking them in a no-frills, two-ingredient formula creates a great, no-BS product that most supplement consumers will reach for again and again.



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